It is claimed:

1. In a hearing instrument including a plurality of transducers, a self-diagnostics system, comprising:

a detection circuitry operable to monitor the functional status of at least one transducer by measuring an energy level output of the transducer and comparing the energy level output to a pre-determined threshold level;

the detection circuitry being further operable to generate an error message output if the measured energy level output of the transducer falls below the pre-determined threshold level; and

a memory device coupled to the detection circuitry and operable to store the error message output generated by the detection circuitry.

2. The self-diagnostics system of claim 1, further comprising:

an error indicator coupled to the detection circuitry and operable to activate an error indicia for communicating a possible transducer malfunction to a hearing instrument user; and

the detection circuitry being further operable to cause the error indicator to activate the error indicia if the measured energy level output of the transducer falls below the pre-determined threshold level.

3. The self-diagnostics system of claim 2, wherein the error indicia is an indicator light.

4. The self-diagnostics system of claim 3, wherein the error indicia includes a tone generator that generates an error tone.

5. The self-diagnostics system of claim 1, wherein the transducer is an outer microphone.

6. The self-diagnostics system of claim 1, wherein the transducer is an inner microphone.

7. The self-diagnostics system of claim 1, wherein the hearing instrument includes a programming port, and wherein the error message may be downloaded from the memory device via the programming port.

8. The self-diagnostics system of claim 1, wherein:

the detection circuitry is further operable to generate a test tone that is directed into the ear canal of a hearing instrument user by a hearing instrument loudspeaker, the detection circuitry generating the test tone if the measured energy level output of the transducer falls below the pre-determined level; and

the detection circuitry being further operable to monitor an inner microphone to detect the test tone.

9. The self-diagnostics system of claim 1, wherein the plurality of transducers include two outer microphones configured to generate a directional microphone response, and wherein the detection circuitry is operable to compare the measured energy levels of the two outer microphones.

10. The self-diagnostics system of claim 9, wherein the detection circuitry is further operable to generate an error message if the difference between the measured energy levels of the two outer microphones exceeds a pre-determined threshold.

11. The self-diagnostics system of claim 9, wherein the detection circuitry is further operable to initiate an auto-calibration sequence to adjust the frequency responses of the two outer microphones if the difference between the measured energy levels of the two outer microphones exceeds a pre-determined threshold.

12. The self-diagnostics system of claim 1, wherein:

the plurality of transducers include a loudspeaker and an inner microphone; and

the detection circuitry is further operable to measure the energy level of an audio output signal that is directed into the ear canal of a hearing aid user by the loudspeaker and measure the energy level of a inner microphone signal received by the inner microphone, wherein the detection circuitry compares the measured energy level of the inner microphone signal with an estimated energy level to detect a possible transducer malfunction.

13. The self-diagnostics system of claim 12, wherein the detection circuitry is operable to generate and error message if the difference between the measured energy level of the inner microphone and the estimated energy level exceeds a pre-determined threshold.

14. In a digital hearing instrument having at least one hearing instrument parameter that may be configured by a person, a method for detecting a potential hearing instrument malfunction, comprising:

monitoring a configuration of the hearing instrument parameter to determine a normal setting for the hearing instrument parameter;

detecting a deviation from the normal setting for the hearing instrument parameter; and

automatically generating an error message upon detecting the deviation.

15. The method of claim 14, further comprising:

recording the error message in a memory device on the hearing instrument.

16. The method of claim 14, wherein the error message causes the hearing instrument to alert a hearing instrument user of the potential hearing instrument malfunction.

17. The method of claim 16, further comprising:

activating an indicator light in response to the error message to alert the hearing instrument user of the potential hearing instrument malfunction.

18. The method of claim 16, , further comprising:

generating an audible tone in response to the error message to alert the hearing instrument user of the potential hearing instrument malfunction.

19. The method of claim 14, wherein the hearing instrument parameter is a volume control level.

20. The method of claim 19, wherein the normal setting includes a range of volume control levels.

21. A hearing instrument, comprising:

at least one hearing instrument microphone for receiving an audio input signal;

a sound processor for processing the one or more audio input signals to compensate for a hearing impairment and generate a processed audio signal;

at least one hearing instrument receiver for converting the processed audio signal into an audio output signal;

a detection circuitry operable to monitor an energy level at a node within the hearing instrument and comparing the detected energy level with a predetermined range of energy levels to identify a potential hearing instrument malfunction, the detection circuitry identifying the potential hearing instrument malfunction if the detected energy level deviates from the predetermined range of energy levels.

22. The hearing instrument of claim 21, wherein the node is an output node of the hearing instrument microphone.

23. The hearing instrument of claim 21, wherein the node is an input node of the hearing instrument receiver.

24. The hearing instrument of claim 21, wherein the node is an output node of a hearing instrument battery, wherein the predetermined range is a range of battery voltages, wherein if the detection circuitry detects that a voltage level at the output node of the hearing instrument battery deviates from the predetermined range, then the detection circuitry identifies the potential hearing instrument malfunction as a potential transducer malfunction.